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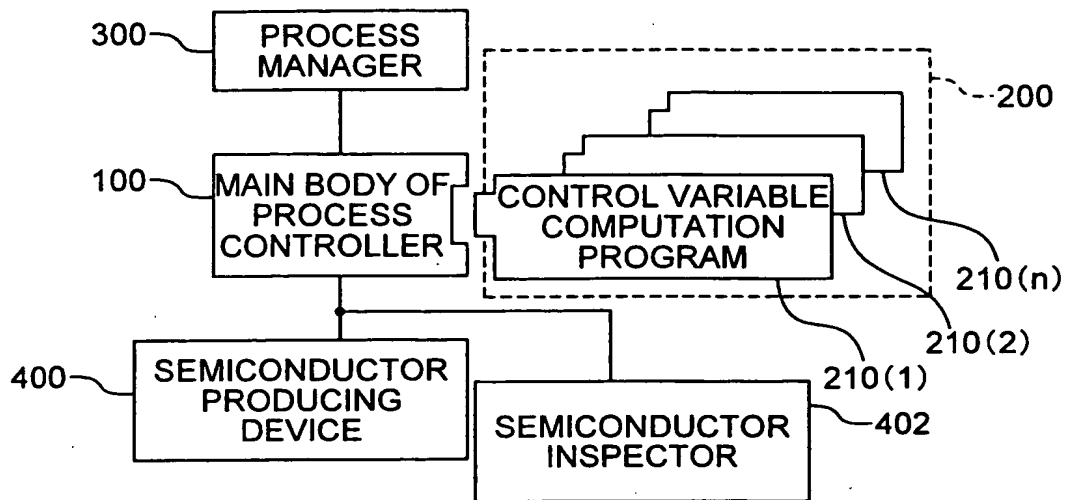


FIG. 1A

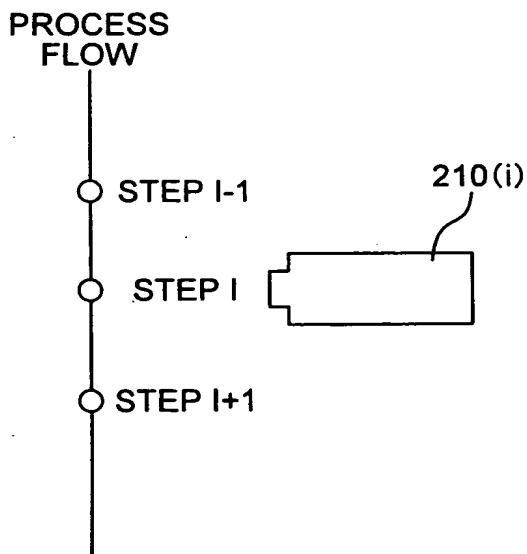


FIG. 1B

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```
CONTROL VARIABLE  
COMPUTATION PROGRAM:  $\alpha$  (OX001/AAA)  
//ACQUIRE "PROCESSING TIME" AS PROCESS  
MANAGING INFORMATION AND SUBSTITUTE IT FOR TEMP  
TEMP=GET (PROCESSING TIME);  
  
//SET THE VALUE OF TEMP FOR CONTROL VARIABLE  
"TIME",AND TRANSFER IT TO THE APPARATUS  
SEND (TIME ,TEMP);
```

FIG. 2

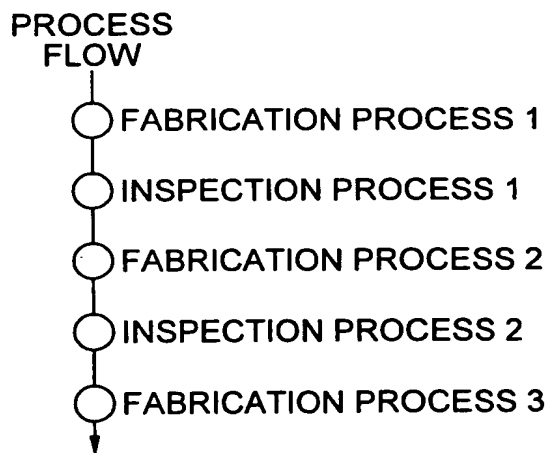


FIG. 3

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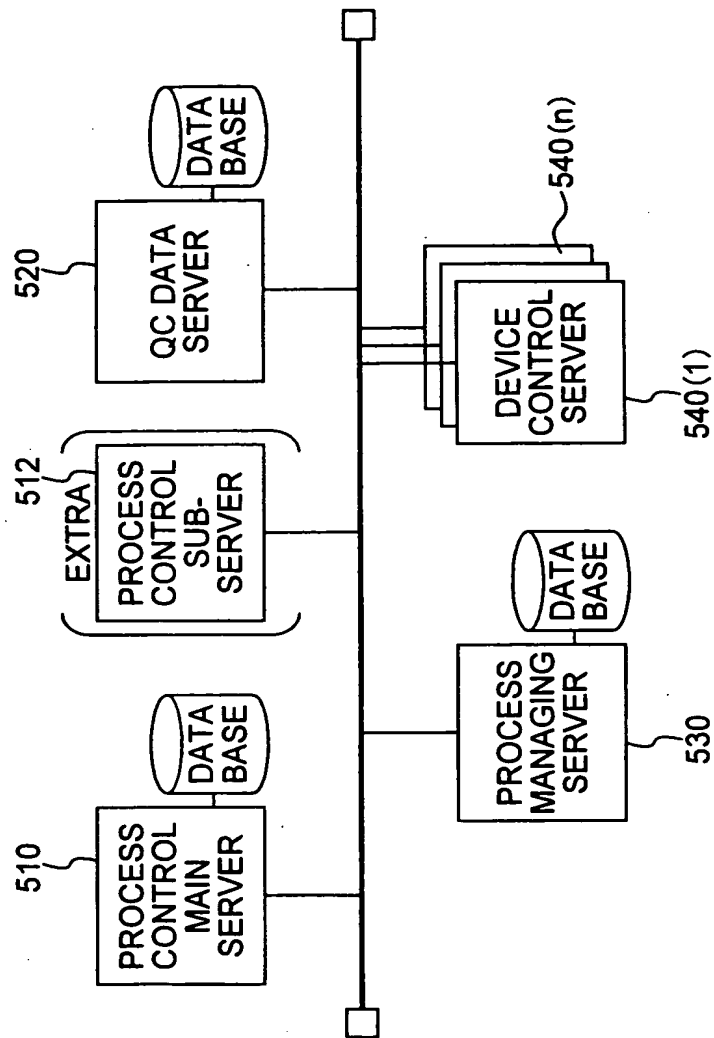


FIG. 4

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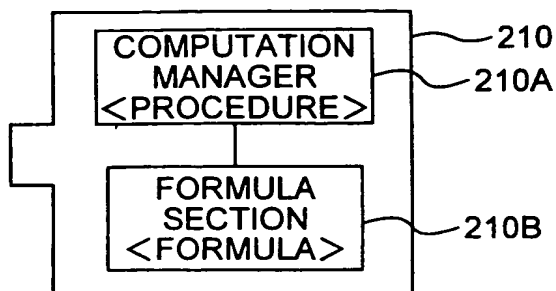


FIG. 5A

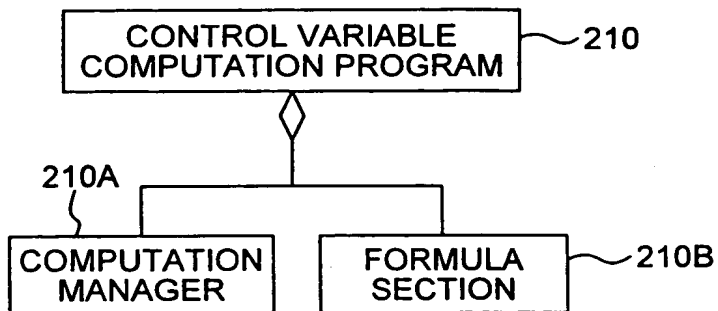


FIG. 5B

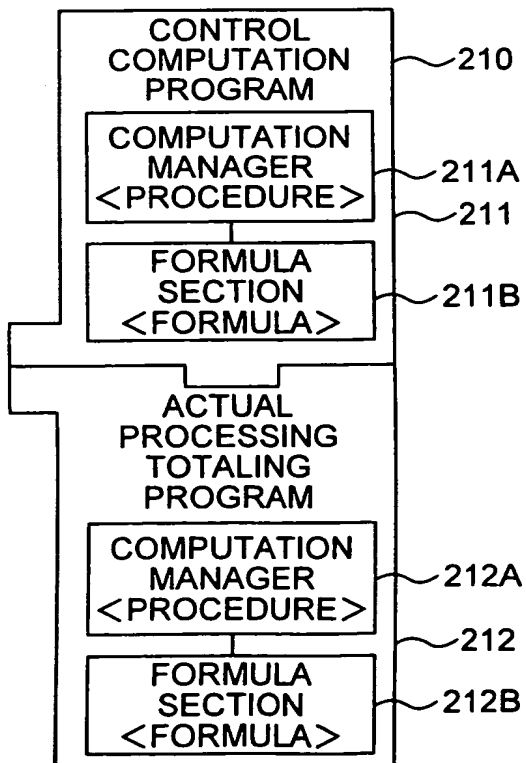


FIG. 6

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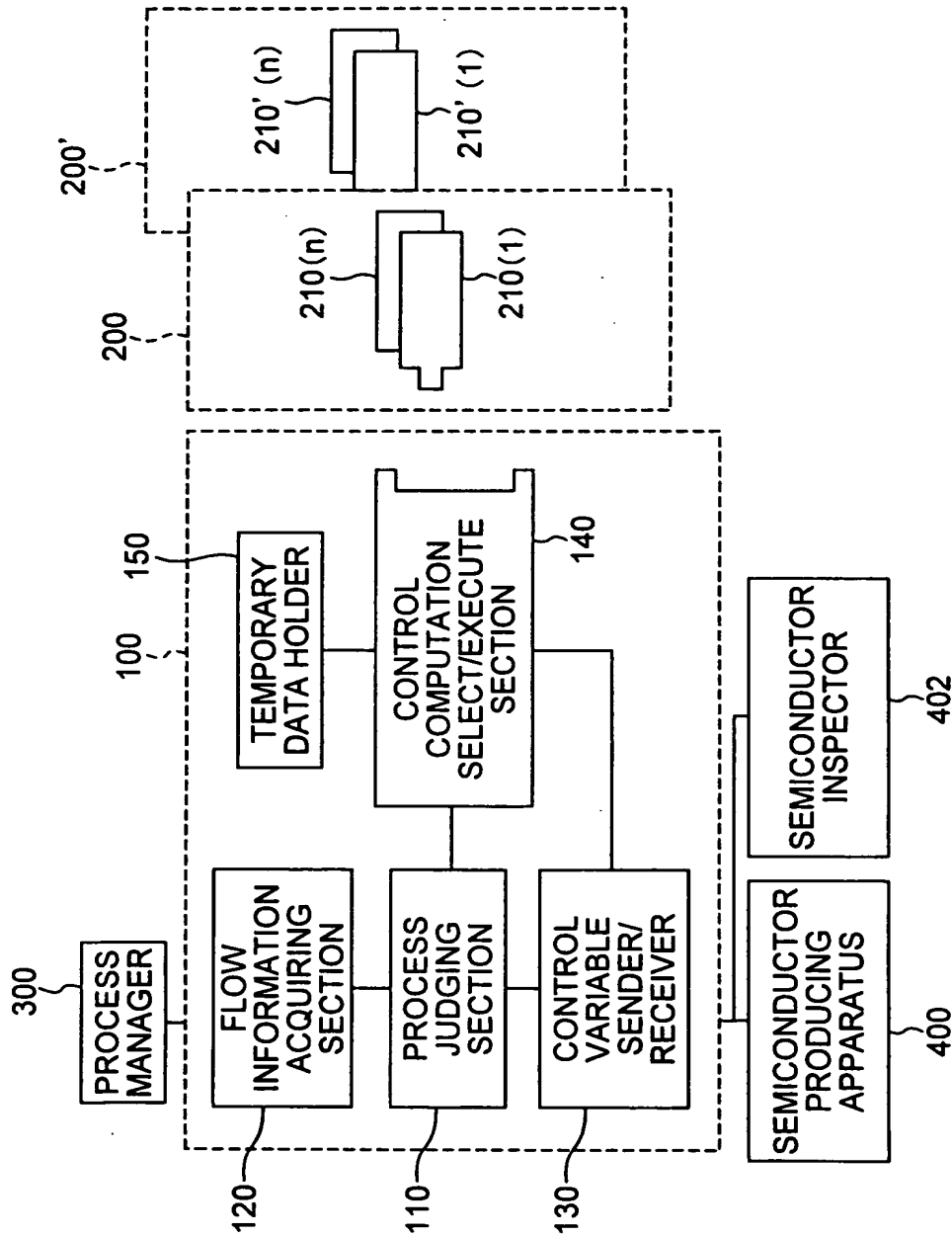


FIG. 7

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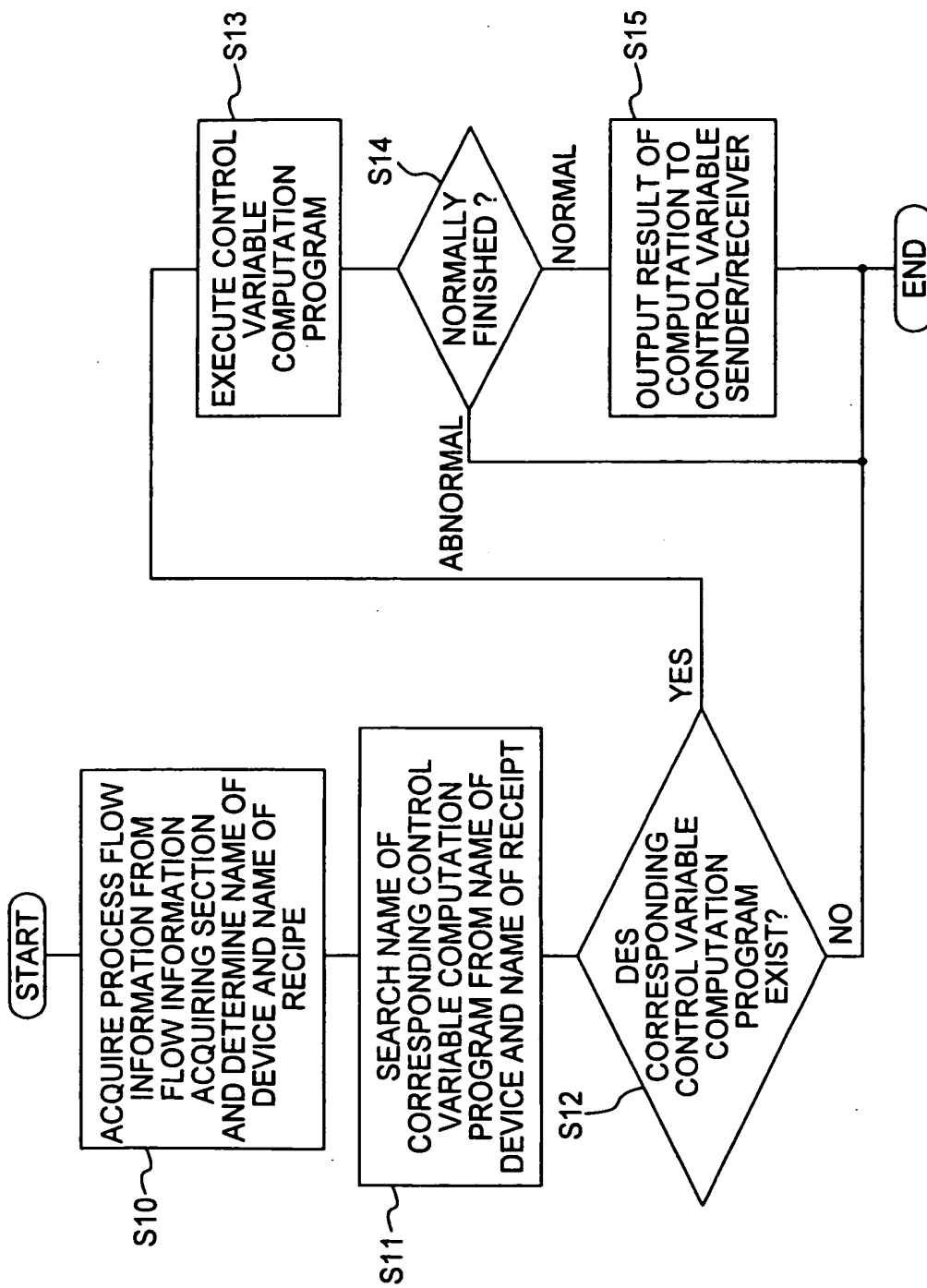


FIG. 8

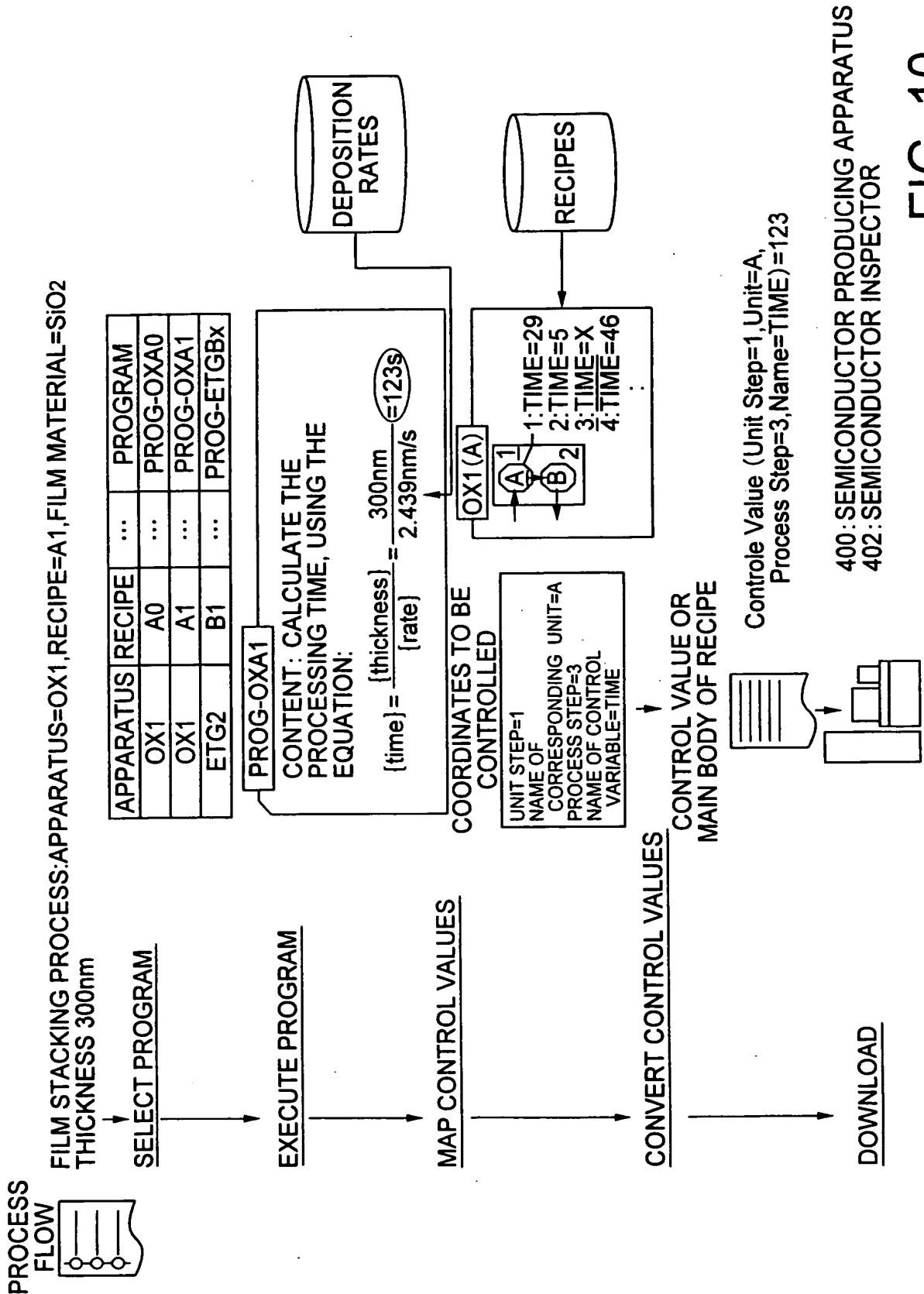


FIG. 10

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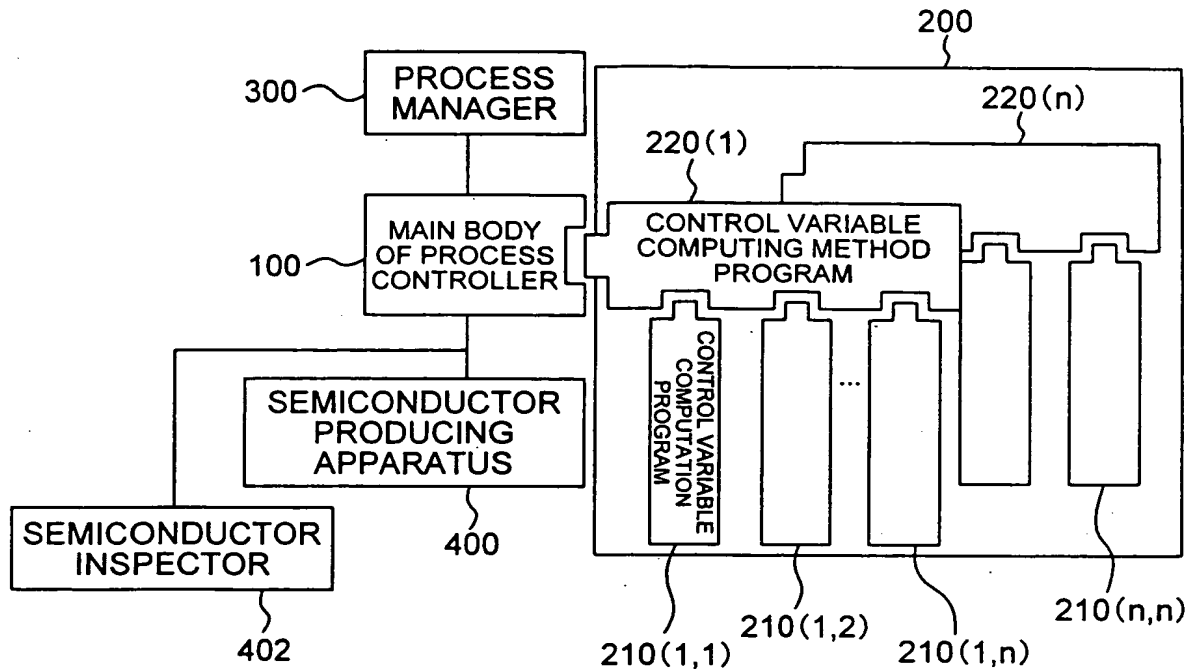


FIG. 11A

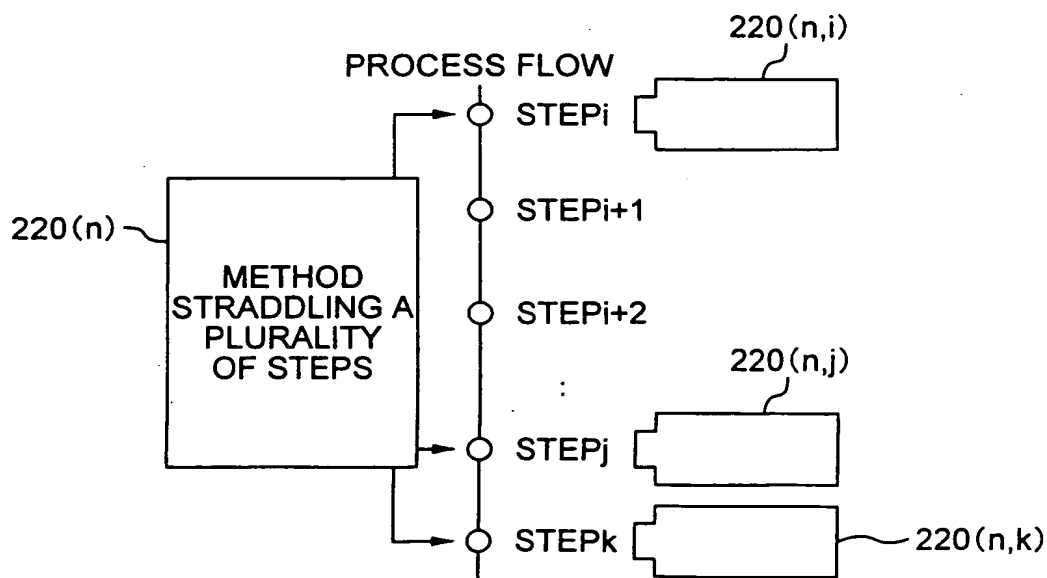


FIG. 11B

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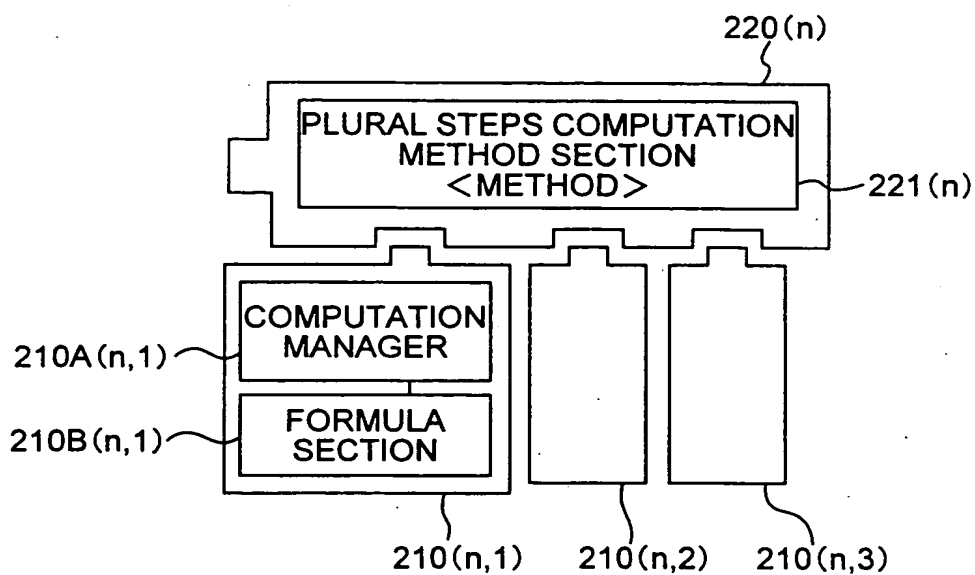


FIG. 12A

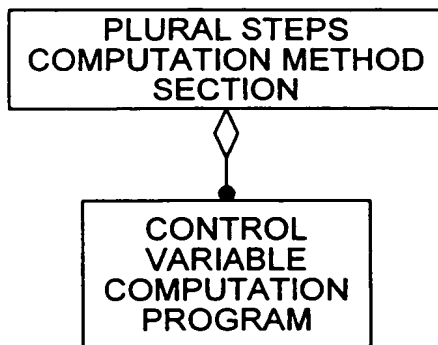
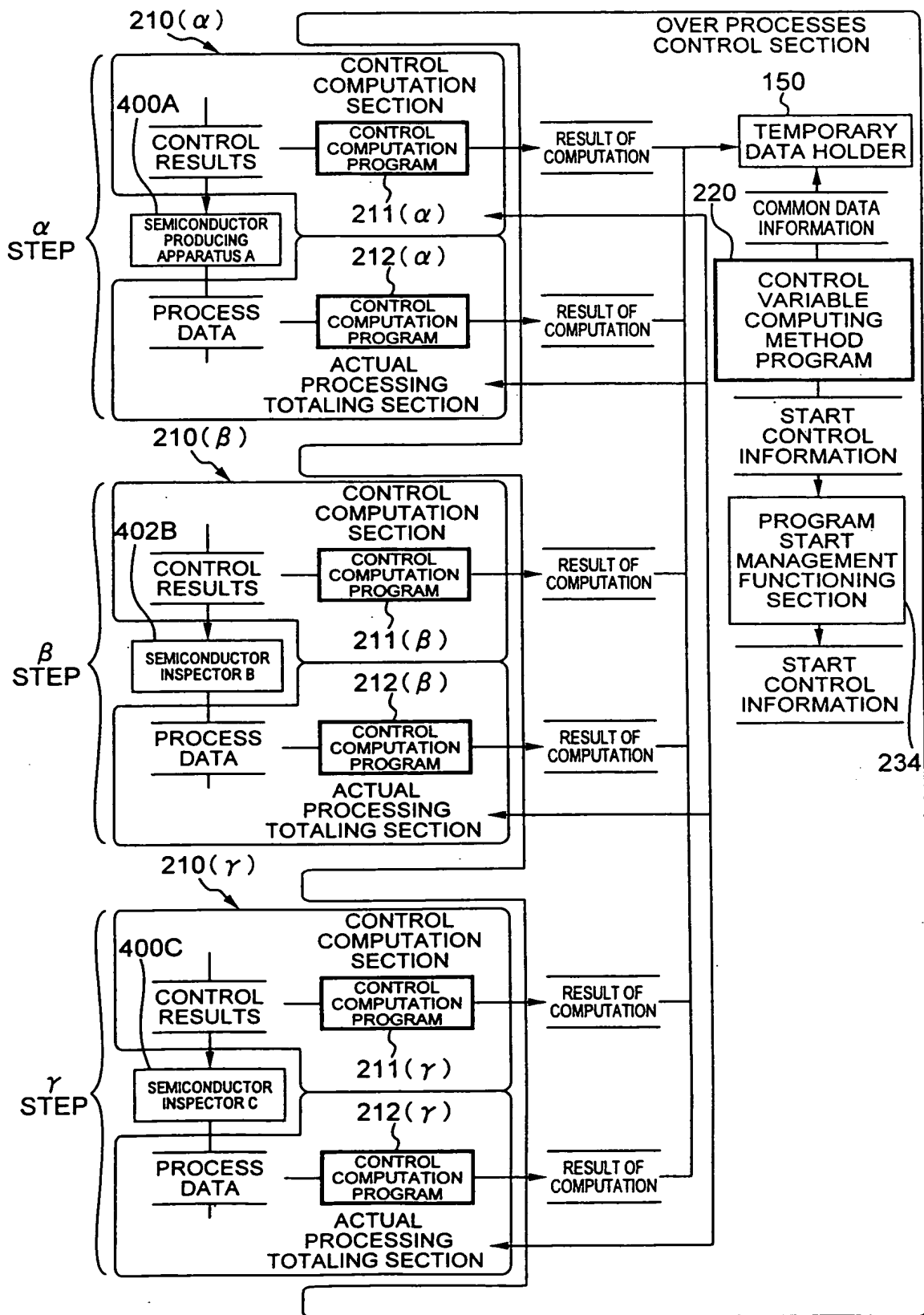


FIG. 12B

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FIG. 13



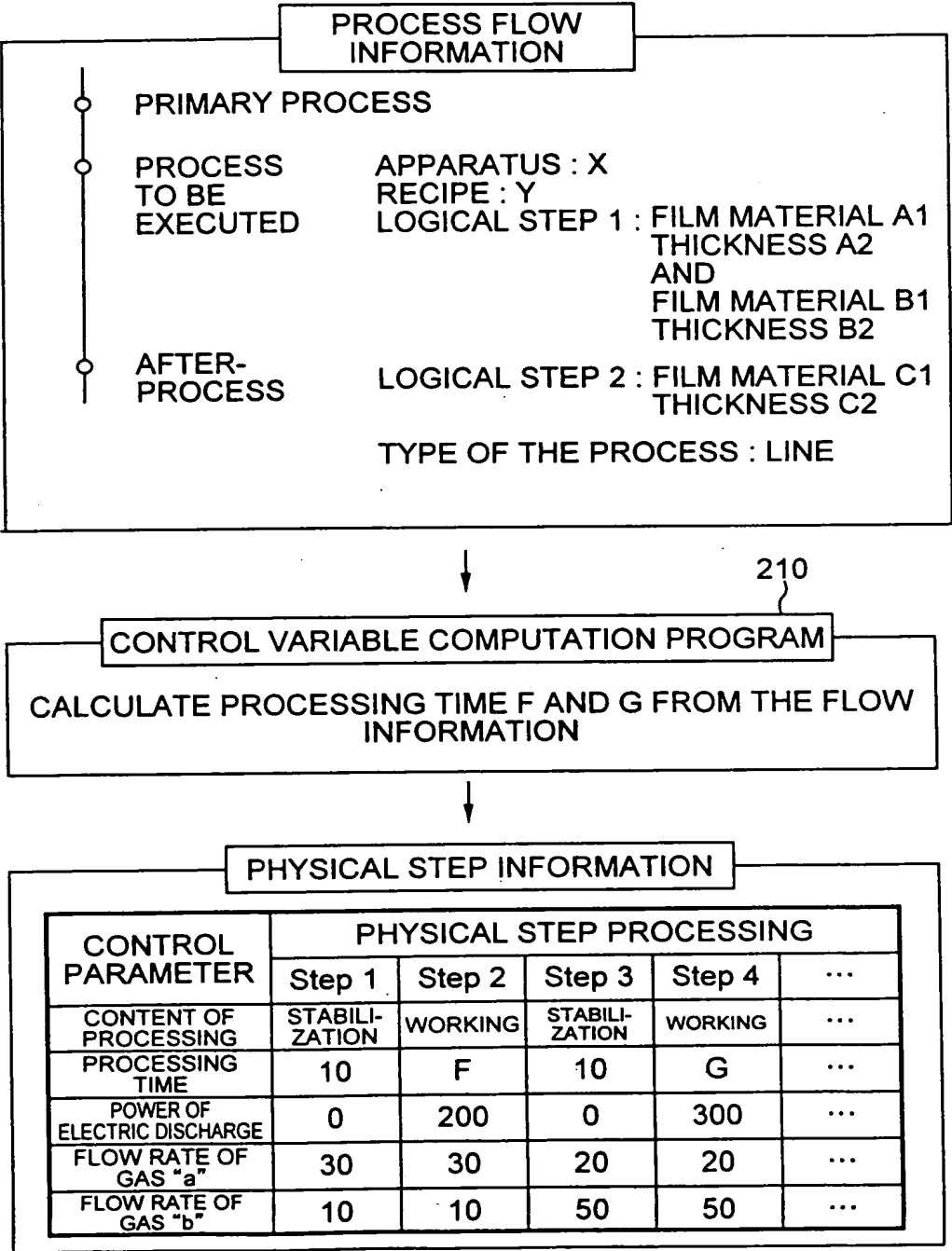
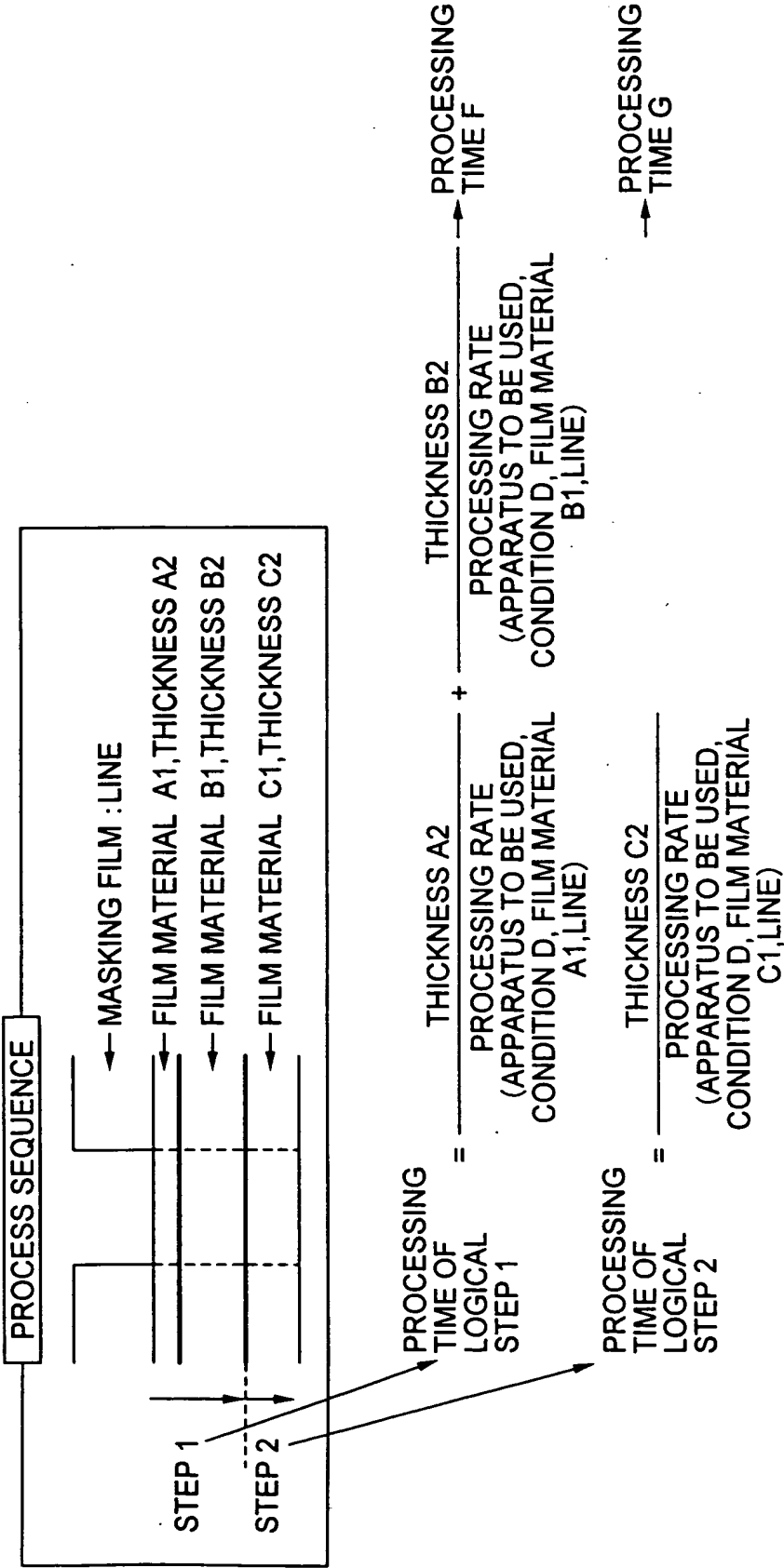


FIG. 14



LOGICAL/PHYSICAL STEP MANAGING TABLE C-1 TABLE

CONTROL PARAMETER	PHYSICAL STEP PROCESSING				SEMICONDUCTOR PRODUCING APPARATUS APPARATUS TO BE USED	FILM MATERIAL	STATUS	PROCESSING RATE
	Step 1	Step 2	Step 3	Step 4				
CONDITION	STABILIZATION	CONDITION D	STABILIZATION	CONDITION E	APPARATUS TO BE USED	A1	LINE	1234
LOGICAL STEP	1	1	1	1	APPARATUS TO BE USED	B1	LINE	2345
					APPARATUS TO BE USED	C1	LINE	2345

FIG. 15

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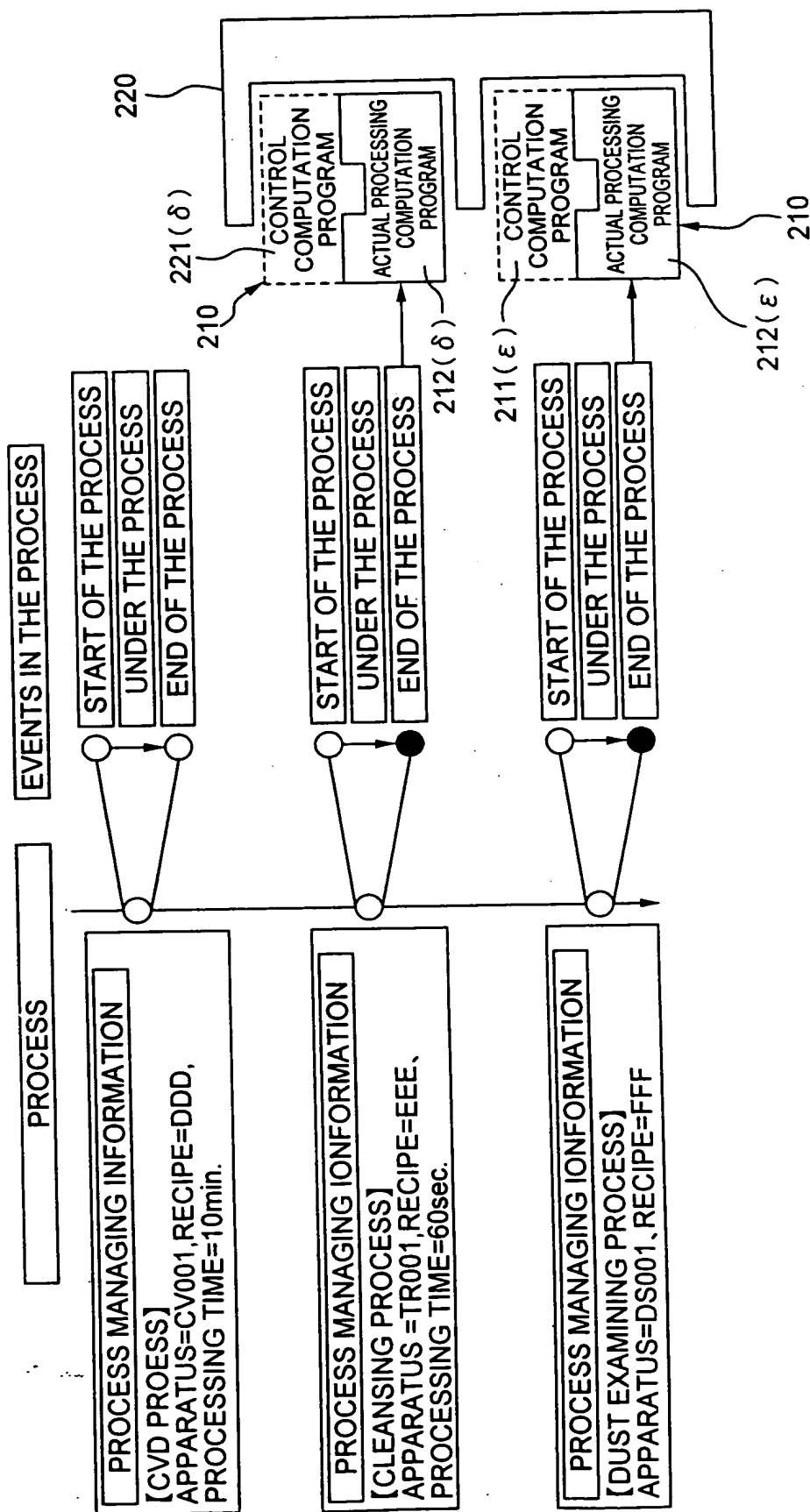


FIG. 16

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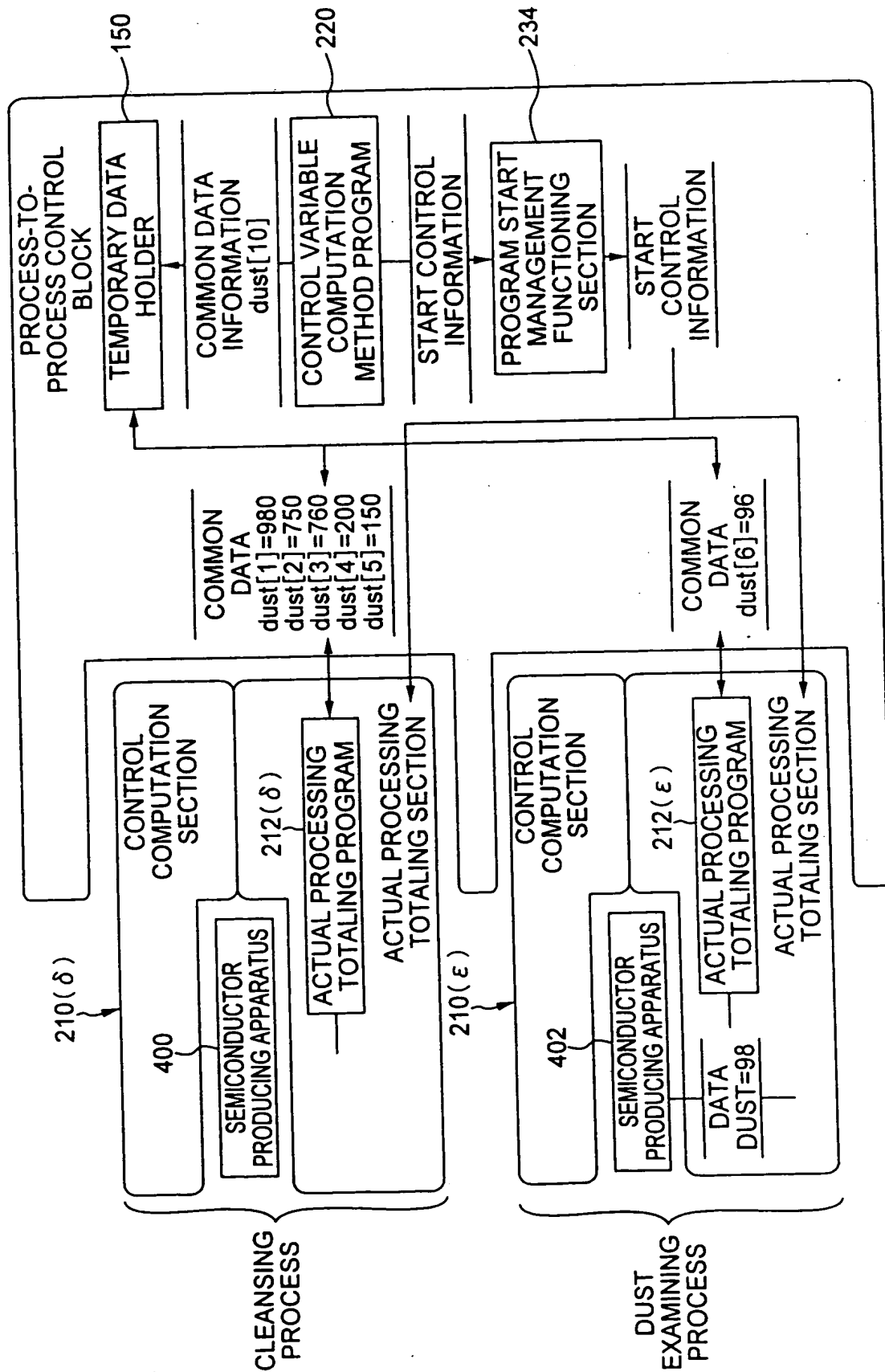


FIG. 17

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ACTUAL PROCESSING TOTALING PROGRAM δ

```
//READ VALUE INTO ARRAY TEMP [] FROM COMMON DATA  
STORAGE REGION "ARRAY []"  
COM_SAVE(DUST[],TEMP[]);  
  
//STATISTICALLY JUDGE THE VALUE OF TEMP[] BY EXTERNAL  
FUNCTION AND SUBSTITUTE THE RESULT FOR RETURN  
return=SPC_JUDGE(temp[]);  
  
//SEND RESULT OF JUDGEMENT TO PROCESS MANAGER TO OMIT  
A STEP PM_SEND(return);
```

ACTUAL PROCESSING TOTALING PROGRAM ϵ (DS001/FFF)

```
//ACQUIRE VALUE OF "DUST " AS PROCESS DATA AND  
SUBSTITUTE IT FOR TEMP  
TEMP=GET (DUST)  
  
//STORE THE VALUE OF TEMP IN COMMON DATA STORAGE  
REGION "DUST[]"  
COM_SAVE(dust[].temp);
```

PROCESS-TO-PROCESS CONTROL PROGRAM:B

```
//DEFINE PROGRAM FOR TOTALING ACTUAL PROCESSING OF  
CLEANSING PROCESS  
PROGRAM_DEFINE( $\delta$ );  
  
//DEFINE PROGRAM FOR TOTALING ACTUAL PROCESSING  
OF DUST INSPECTION PROCESS  
PROGRAM_DEFINE( $\epsilon$ );  
  
//DEFINE "ARRAY DUST[]" IN COMMON DATA STORAGE  
REGION  
COM_DEFINE(dust[]);
```

FIG. 18

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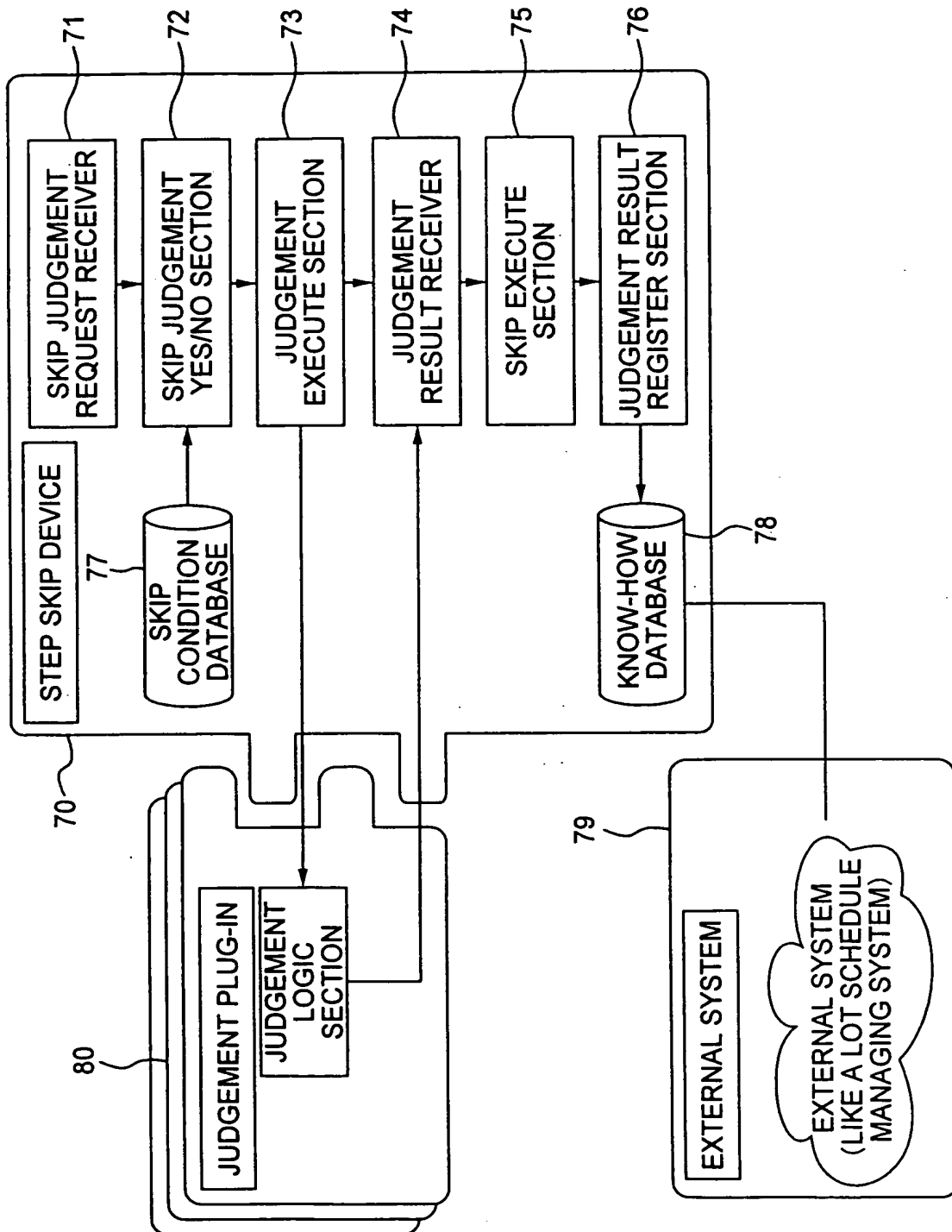


FIG. 19

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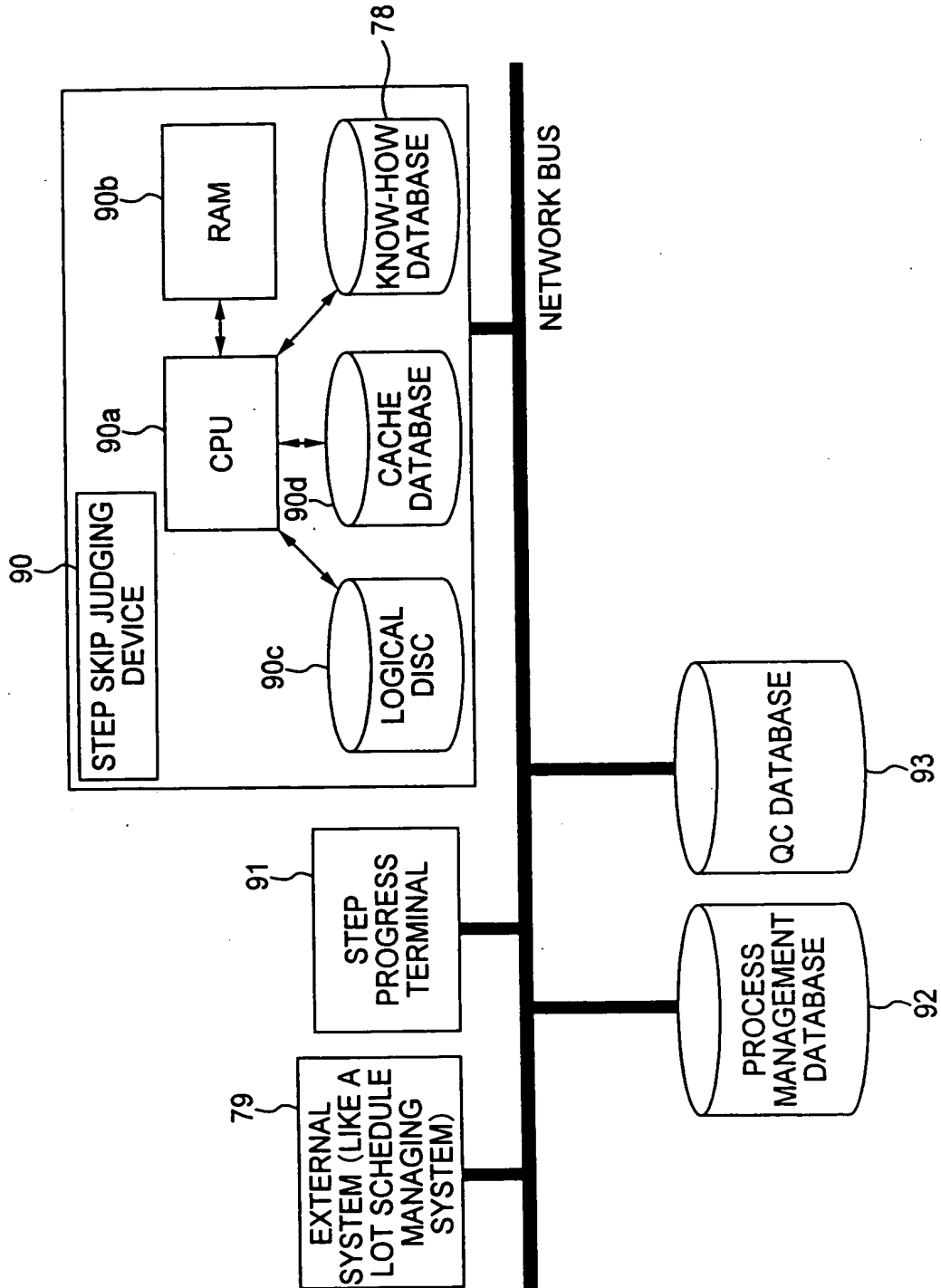


FIG. 20

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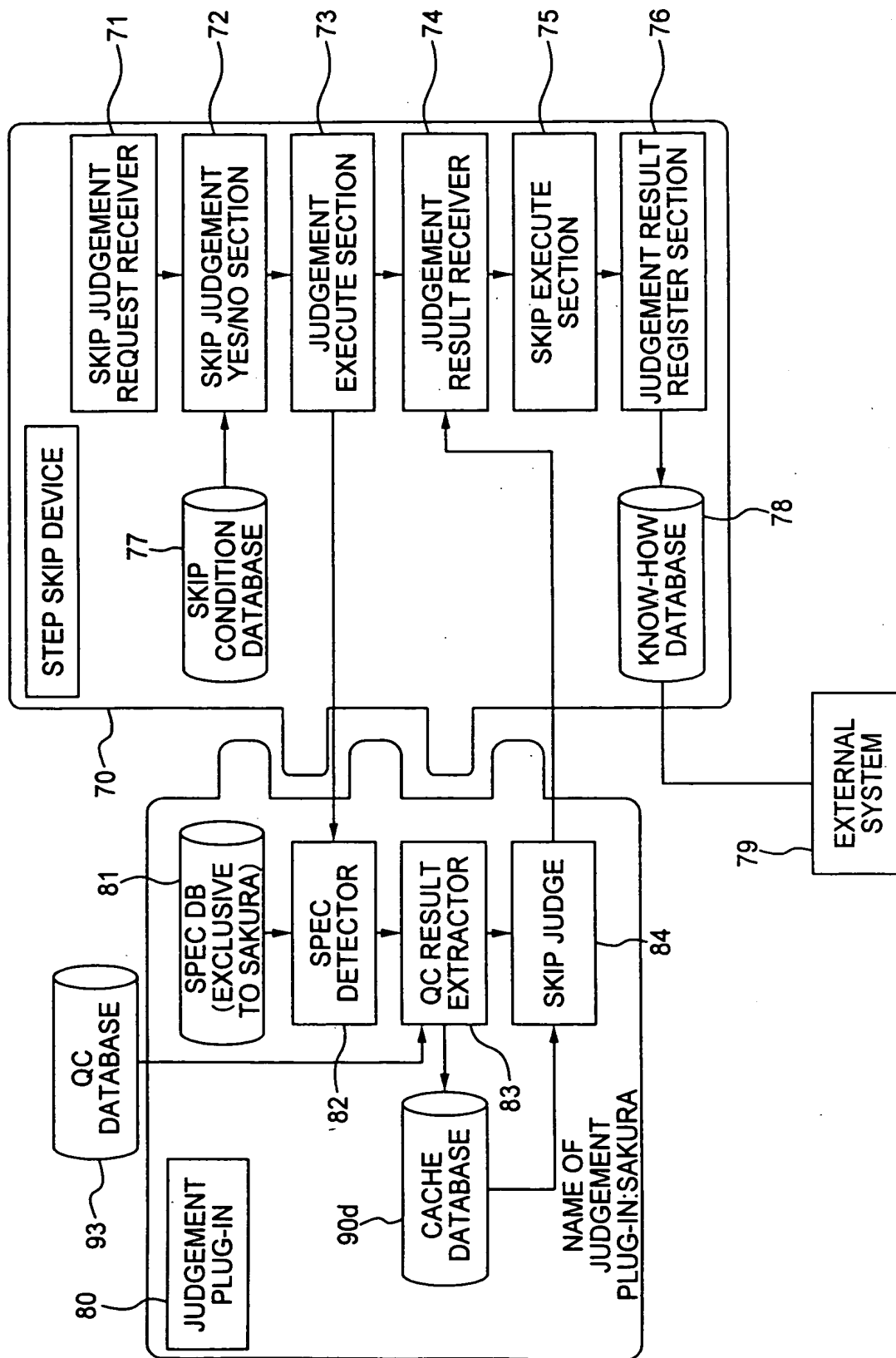


FIG. 21

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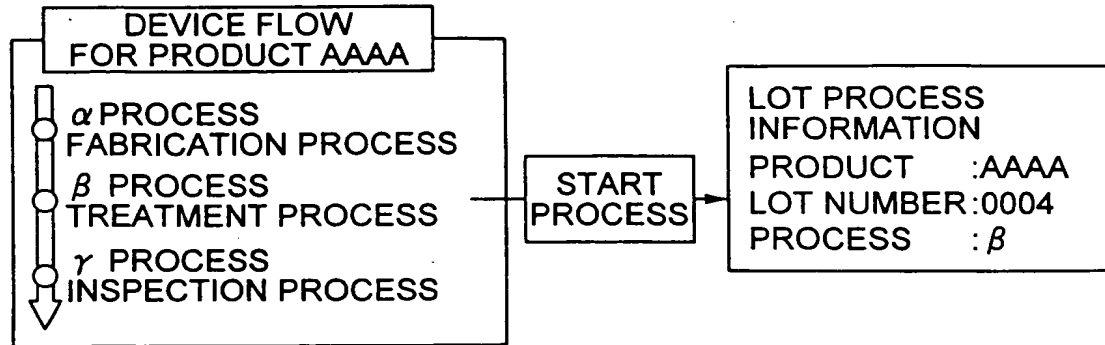


FIG. 22

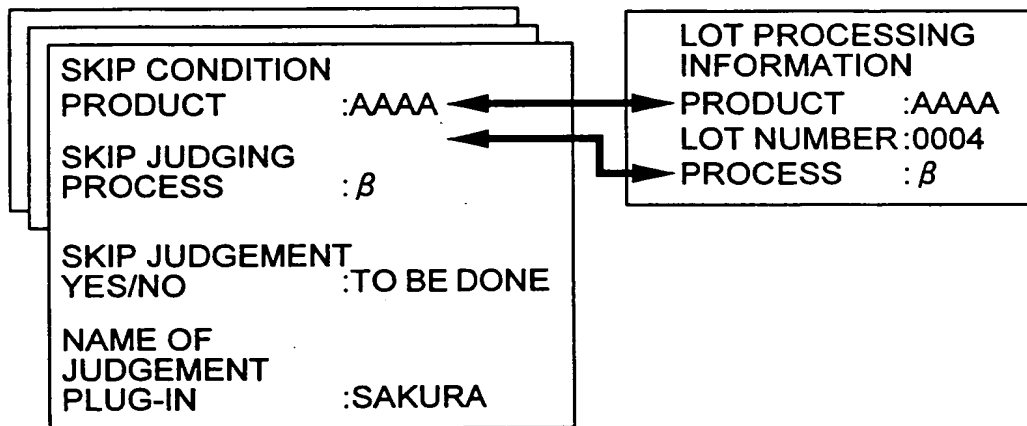


FIG. 23

JUDGEMENT PLUG-IN :SAKURA
INPUT :A=PRODUCT,B=SKIP JUDGING PROCESS
OUTPUT :R=RESULT OF JUDGEMENT
LOGIC :ACQUIRE TYPE OF JUDGEMENT QC STEP C,
DATA D TO BE JUDGED, AND SPECS E,F & G
FOR PRODUCT A AND SKIP JUDGING
PROCESS B FROM SPEC DB EXCLUSIVE TO
JUDGEMENT PLUG-IN SAKURA, AND IF
F<SPEC D<G FOR E CONSECUTIVE TIMES,
SUBSTITUTE "EXECUTE STEP SKIP" FOR R.

FIG. 24

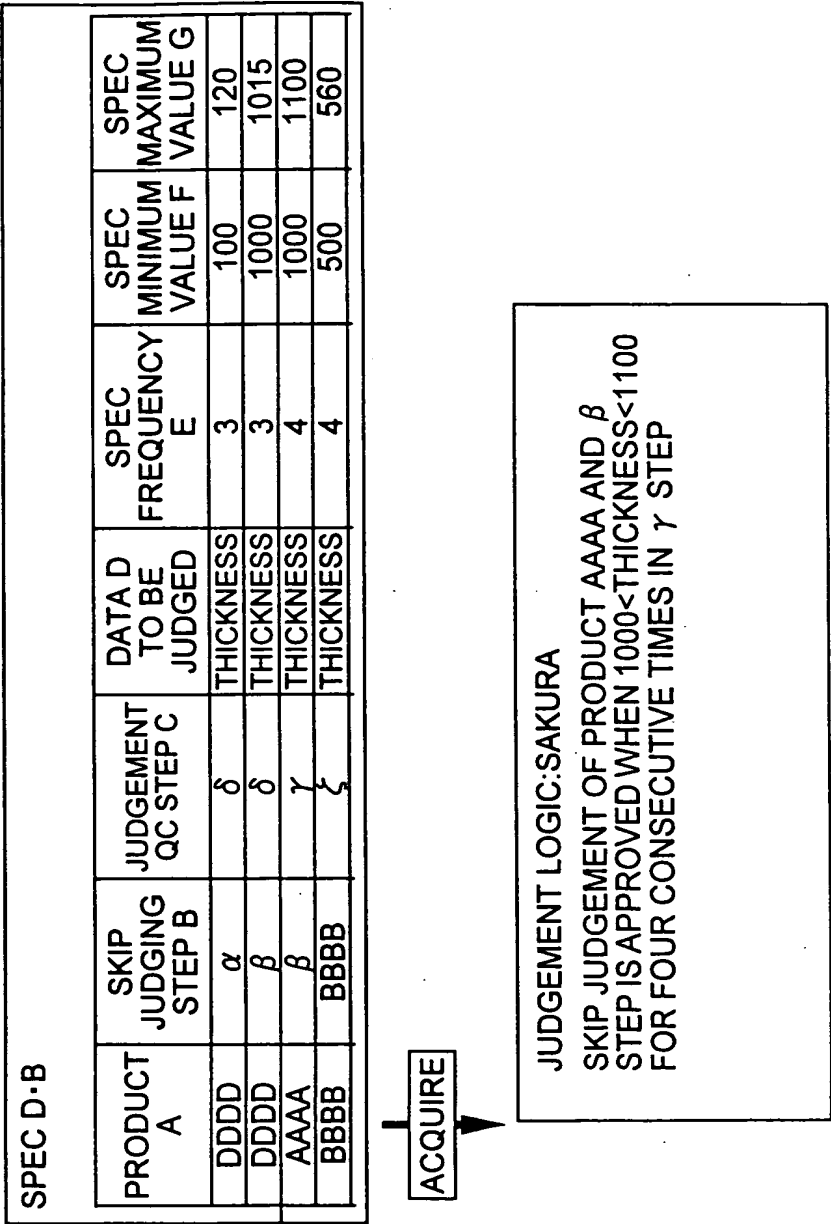


FIG. 25

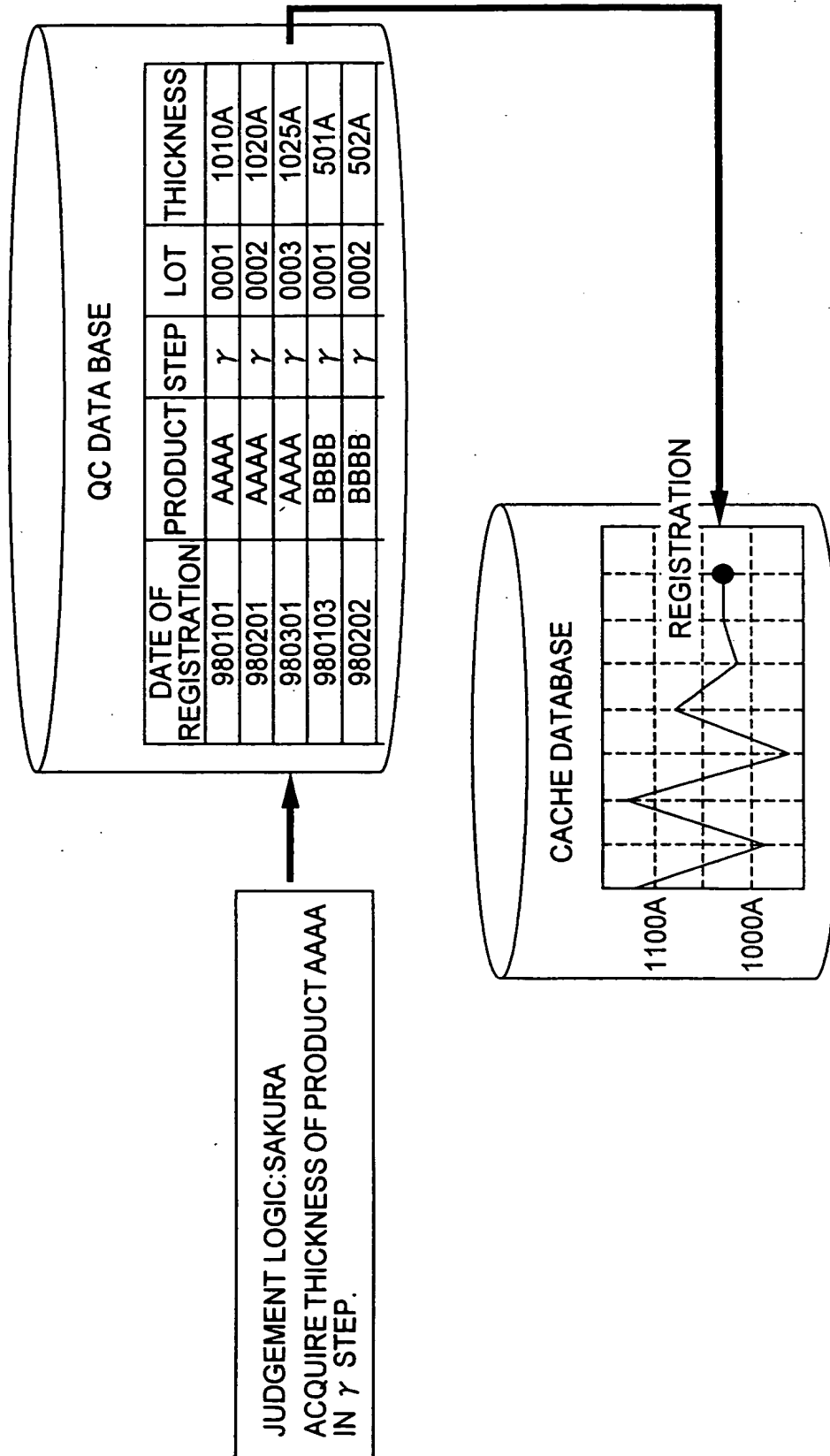


FIG. 26

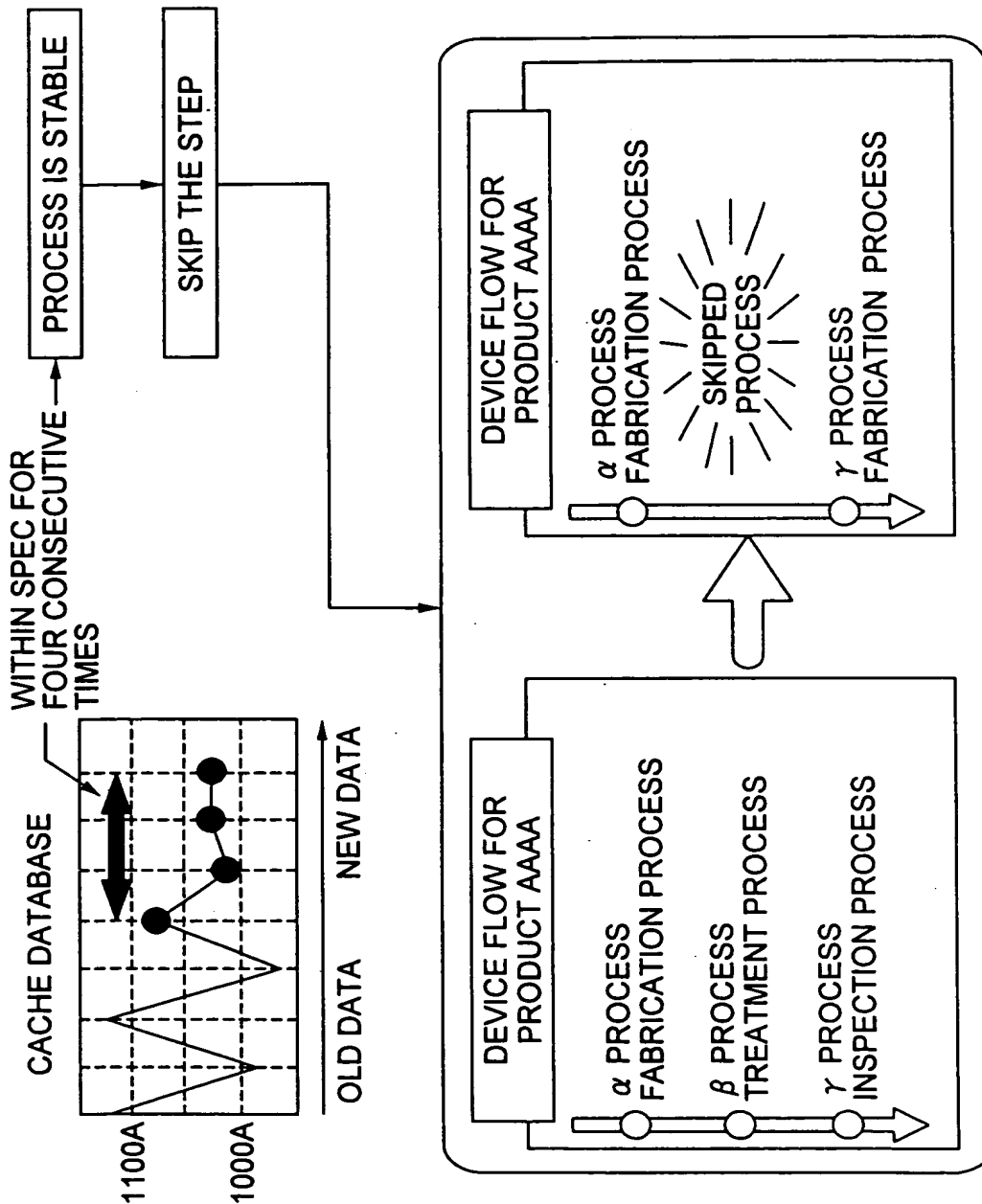


FIG. 27

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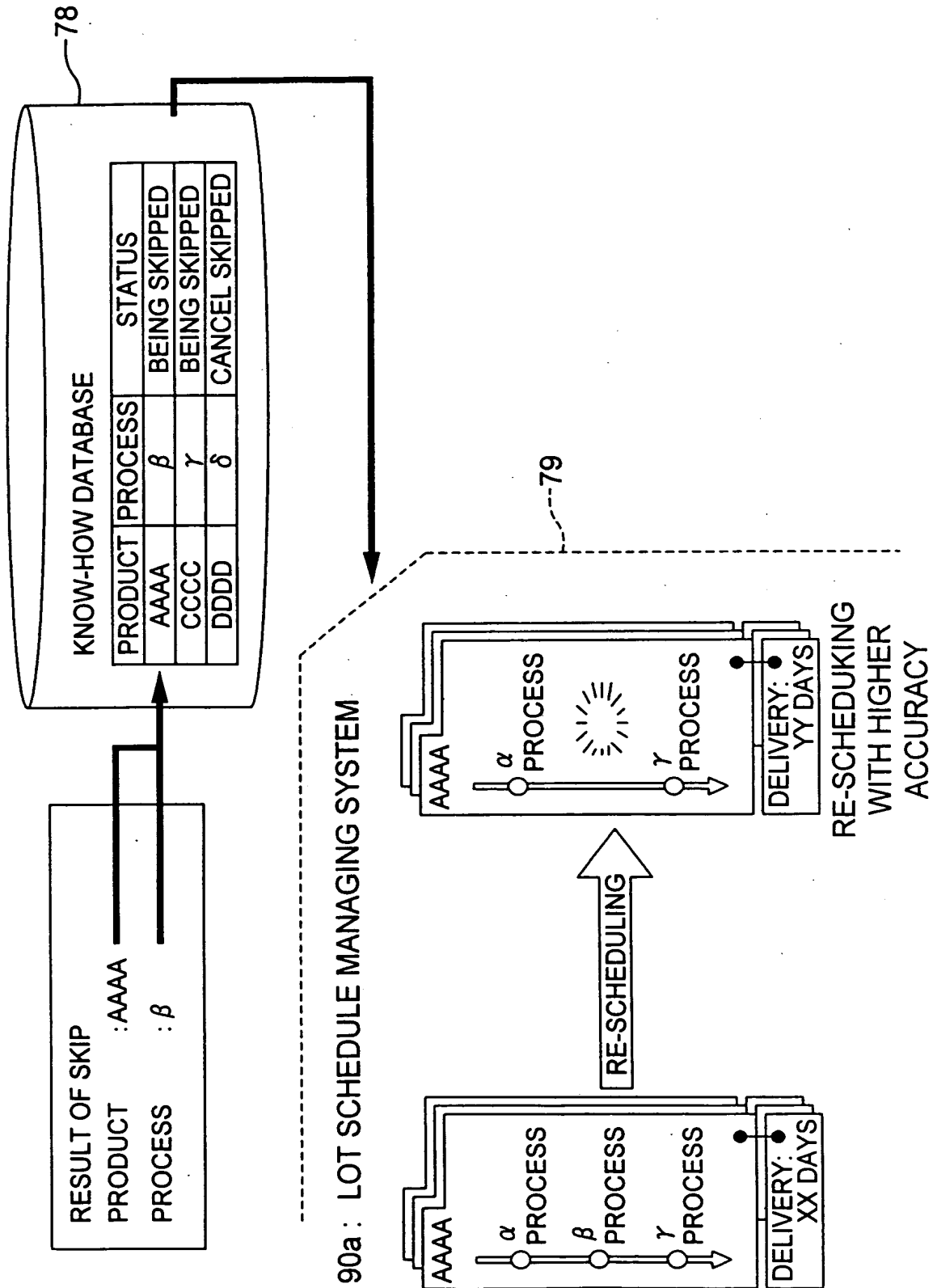


FIG. 28

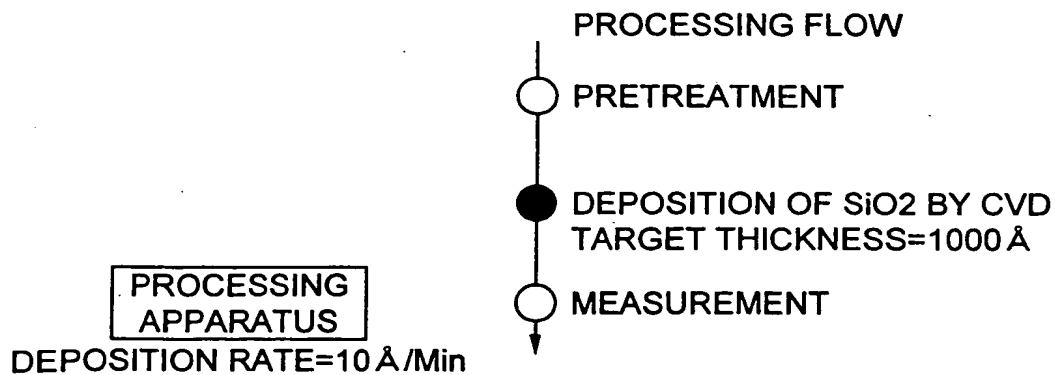


FIG. 29 PRIOR ART

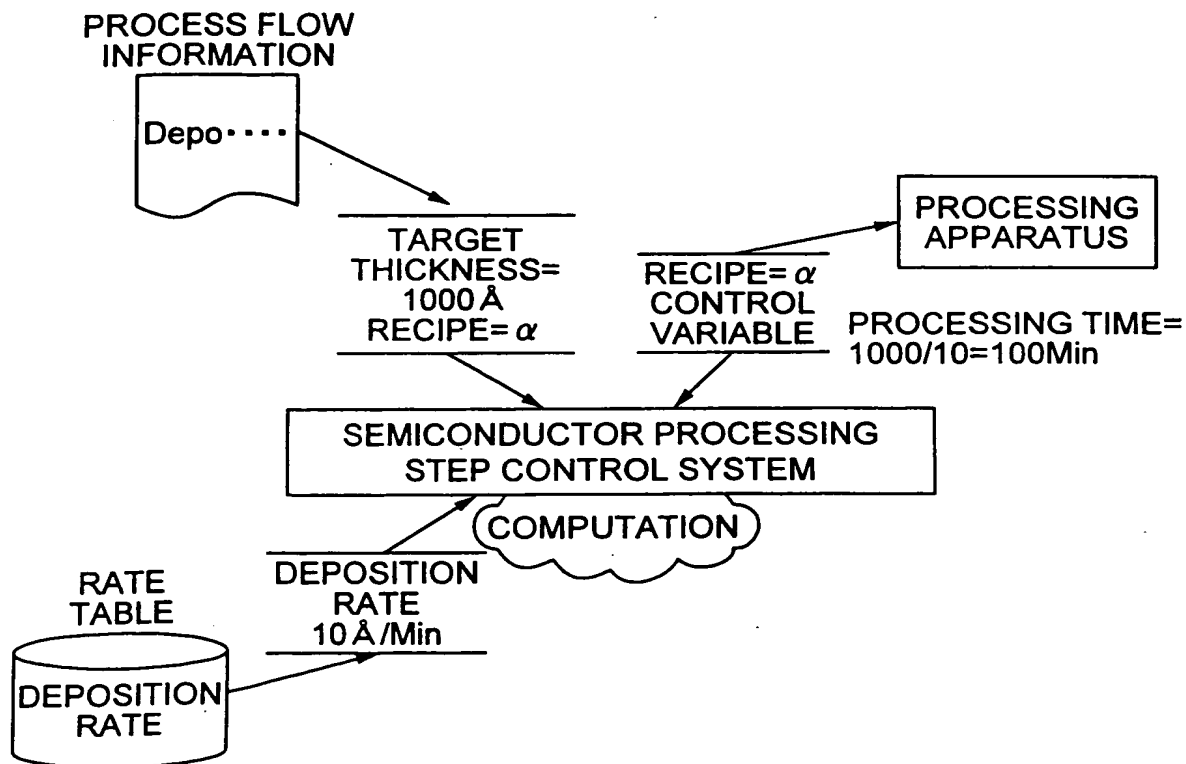


FIG. 30 PRIOR ART

(2)EXAMPLE OF ETCHING APPARATUS

SiO2 3000A Si3N4 1000A PolySi 2000A Sio2 500A	1' st Step	
	2' nd Step	
	3' rd Step	

PROCESS SPECIFICATION PARAMETER

STR=SiO2[3000]+SiN[1000]-POLY[2000]-SiO2[500]
TIME=JUST(30%)-50S-JUST(0%)+10S
RECIPE=B1

RECIPE MANAGING TABLE (B1)

STEP	1	2	3
CONDITION	Etg1	Etg2	Etg3

RATE TABLE

CONDITION	Etg1		Etg2	Etg3
FILE MATERIAL	SIO2	SIN	POLY	SIO2
Rate (A/min)	1234.5	2345.6	3456.7	4567.8

Time=Σ ($\frac{\text{Thickness (Film)}}{\text{EtchRte (Film, Condition)}}$) (1+Over%)+Abs Times

CONTROL VARIABLE OUTPUT RESULT

STEP	1	2	3
TIME (sec)	(3000/1234.5+1000/2345.6)*1.3*60 =223	DESIGNATED TIME=51	(500/4567.8)*1.0*60+10 =17

FIG. 32 PRIOR ART

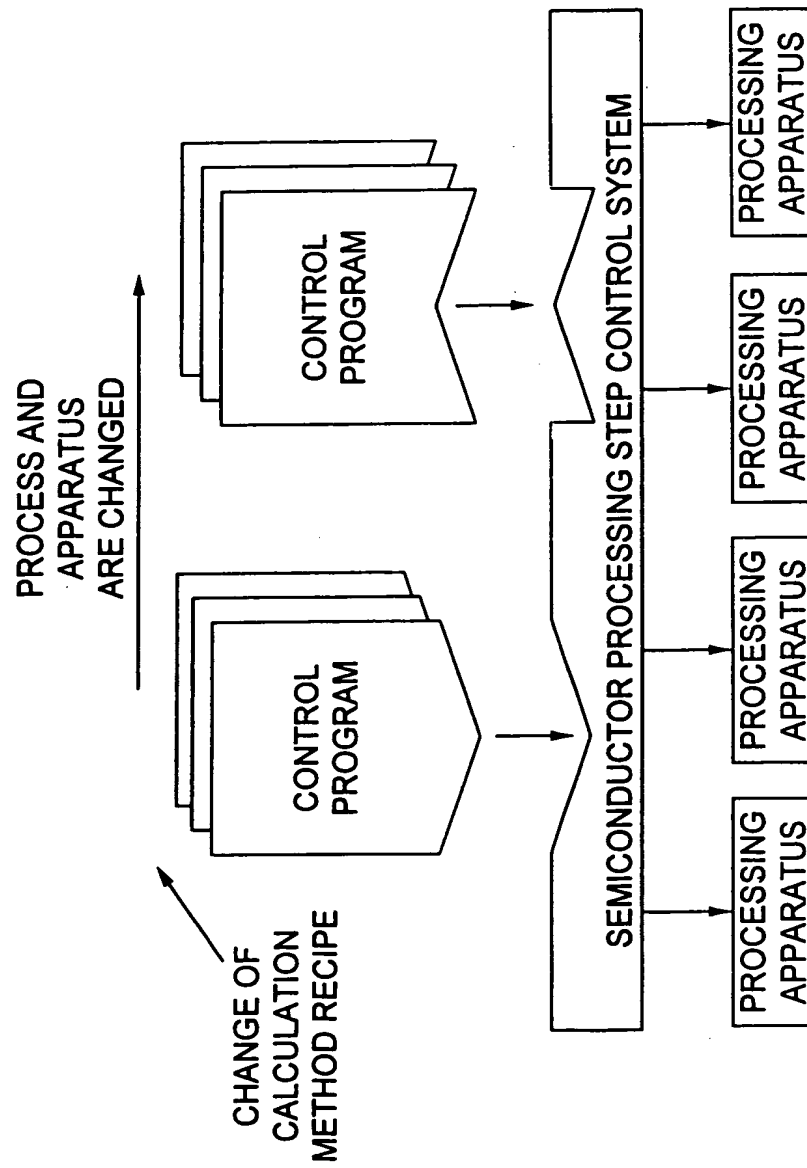


FIG. 33 PRIOR ART